

Appl. No. 10/783,455

Amendment date: February 21, 2007

Reply to January 24, 2007 Notice of Non-Compliant Amendment (37 CFR 1.121)

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

What is claimed is:

1-8. (Cancelled)

9. (currently amended) An isolated nucleic acid molecule ~~according to claim 7~~, encoding an altered G protein or polypeptide of RSV, wherein the alteration is in one or more regions selected from the group consisting of the region from amino acid 159 to amino acid 198, the region from amino acid 159 to amino acid 174 as set out in SEQ ID NO: 15, the region from amino acid 171 to amino acid 187 as set out in SEQ ID NO: 17, the region from amino acid 176 to amino acid 190 as set out in SEQ ID NO: 18, and the region from amino acid 184 to amino acid 198 as set out in SEQ ID NO: 19, wherein said altered G protein or polypeptide retains immunogenicity and, when said altered G protein or polypeptide is incorporated into an immunogenic composition and administered to a vertebrate, does not induce enhanced disease upon subsequent infection of the vertebrate with RSV.

10. (Cancelled)

11. (Cancelled)

12. (currently amended) The isolated nucleic acid molecule according to Claim 9 ~~Claim 11~~, wherein the alteration is in the

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region from amino acid 184 to amino acid 198 as set out in SEQ ID NO: 19.

13. (currently amended) A ~~The~~ nucleic acid construct comprising an isolated ~~a~~ nucleic acid molecule according to Claim 9 operably linked to a regulatory sequence.

14. A chimeric nucleic acid construct comprising:

a) an isolated nucleic acid molecule encoding an altered G protein or polypeptide of RSV, wherein the alteration is in one or more regions selected from the group consisting of the region from amino acid 159 to amino acid 198, the region from amino acid 159 to amino acid 174 as set out in SEQ ID NO: 15, the region from amino acid 171 to amino acid 187 as set out in SEQ ID NO: 17, the region from amino acid 176 to amino acid 190 as set out in SEQ ID NO: 18, and the region from amino acid 184 to amino acid 198 as set out in SEQ ID NO: 19, wherein said altered G protein or polypeptide retains immunogenicity and, when said altered G protein or polypeptide is incorporated into an immunogenic composition and administered to a vertebrate, does not induce enhanced disease upon subsequent infection of the vertebrate with RSV;

b) an isolated nucleic acid molecule encoding all or an immunogenic portion of F protein of RSV; and

c) a regulatory sequence operably linked to both (a) and (b).

15-40. (Cancelled)

41. (currently amended) An immunogenic composition ~~vaccine~~ comprising a physiologically acceptable vehicle and an effective amount of an isolated nucleic acid molecule encoding an altered G protein or polypeptide of RSV, wherein the alteration is in one or

more regions selected from the group consisting of the region from amino acid 159 to amino acid 198, the region from amino acid 159 to amino acid 174 as set out in SEQ ID NO: 15, the region from amino acid 171 to amino acid 187 as set out in SEQ ID NO: 17, the region from amino acid 176 to amino acid 190 as set out in SEQ ID NO: 18, and the region from amino acid 184 to amino acid 198 as set out in SEQ ID NO: 19, where wherein said altered G protein or polypeptide retains immunogenicity and, when said altered G protein or polypeptide is incorporated into an immunogenic composition vaccine and administered to a vertebrate, provides protection without inducing enhanced disease upon subsequent infection of the vertebrate with RSV.

42. (currently amended) The immunogenic composition vaccine according to Claim 41, further comprising a transfection-facilitating agent.

43. (currently amended) A method of inducing an immune response in a vertebrate, comprising administering to said vertebrate an effective amount of ~~DNA~~ an isolated nucleic acid molecule encoding an altered RSV G protein or polypeptide effective to induce an immune response, and a transfection-facilitating agent, wherein the alteration is in one or more regions selected from the group consisting of the region from amino acid 159 to amino acid 198, the region from amino acid 159 to amino acid 174 as set out in SEQ ID NO: 15, the region from amino acid 171 to amino acid 187 as set out in SEQ ID NO: 17, the region from amino acid 176 to amino acid 190 as set out in SEQ ID NO: 18, and the region from amino acid 184 to amino acid 198 as set out in SEQ ID NO: 19, where said altered G protein or polypeptide retains immunogenicity and, when wherein said altered G protein or polypeptide is incorporated into an immunogenic composition a ~~vaccine~~ and administered to a vertebrate, provides protection

without inducing enhanced disease upon subsequent infection of the vertebrate with RSV.

44-50. (Cancelled)

51. (currently amended) An immunogenic composition ~~A-vaccine composition~~ comprising a physiologically acceptable vehicle and an immunologically effective amount of a live attenuated pathogen which has inserted within it as a heterologous nucleic acid segment a nucleic acid sequence encoding an altered G protein or polypeptide of RSV, wherein the alteration is in one or more regions selected from the group consisting of the region from amino acid 159 to amino acid 198, the region from amino acid 159 to amino acid 174 as set out in SEQ ID NO: 15, the region from amino acid 171 to amino acid 187 as set out in SEQ ID NO: 17, the region from amino acid 176 to amino acid 190 as set out in SEQ ID NO: 18, and the region from amino acid 184 to amino acid 198 as set out in SEQ ID NO: 19, such that upon administration to the vertebrate, the altered G protein or polypeptide is expressed and is immunogenic, but does not induce enhanced disease upon subsequent infection of the vertebrate with RSV.

52. (currently amended) The immunogenic composition ~~A-vaccine composition~~ according to Claim 51, wherein the live attenuated pathogen is an attenuated bacterium.

53. (currently amended) The immunogenic composition ~~A-vaccine composition~~ according to Claim 52, wherein the live attenuated bacterium is Salmonella.

54. (currently amended) The immunogenic composition ~~A-vaccine composition~~ according to Claim 51, wherein the live attenuated pathogen is an attenuated virus.

55. (currently amended) The immunogenic composition ~~A-vaccine composition~~ according to Claim 54, wherein the live attenuated virus is an attenuated Venezuelan Equine Encephalitis virus.

56. (currently amended) A method of immunizing a vertebrate against RSV, comprising administering to the vertebrate a composition comprising a physiologically acceptable vehicle and an immunologically effective amount of a live attenuated pathogen which has inserted within it as a heterologous nucleic acid segment a nucleic acid sequence encoding an altered G protein or polypeptide of RSV, wherein the alteration is in one or more regions selected from the group consisting of the region from amino acid 159 to amino acid 198, the region from amino acid 159 to amino acid 174 as set out in SEQ ID NO: 15, the region from amino acid 171 to amino acid 187 as set out in SEQ ID NO: 17, the region from amino acid 176 to amino acid 190 as set out in SEQ ID NO: 18, and the region from amino acid 184 to amino acid 198 as set out in SEQ ID NO: 19, such that upon administration to the vertebrate, the altered G protein or polypeptide is expressed and is immunogenic, but does not induce enhanced disease upon subsequent infection of the vertebrate with RSV.

57. (original) A method according to Claim 56, wherein the live attenuated pathogen is an attenuated bacterium.

58. (original) A method according to Claim 57, wherein the live attenuated bacterium is Salmonella.

59. (original) A method according to Claim 56, wherein the live attenuated pathogen is an attenuated virus.

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60. (original) A method according to Claim 59, wherein the live attenuated virus is an attenuated Venezuelan Equine Encephalitis virus.

61-63. (Cancelled)